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## **1 FINAL INSTRUCTIONS AFTER THE CLOSE OF EVIDENCE**

### **1.1 INTRODUCTORY INSTRUCTIONS<sup>1</sup>**

MEMBERS OF THE JURY: You have heard the evidence in this case. I will now instruct you on the law that you must apply. It is your duty to follow the law as I give it to you. On the other hand, you the jury are the judges of the facts. Do not consider any statement that I have made during the trial or make in these instructions as an indication that I have any opinion about the facts of this case.

After I instruct you on the law, the attorneys will have an opportunity to make their closing arguments. Statements and arguments of the attorneys are not evidence and are not instructions on the law. They are intended only to assist you in understanding the evidence and the parties' contentions.

Answer each question from the facts as you find them. Do not decide who you think should win and then answer the questions accordingly. Your answers and your verdict must be unanimous.

In determining whether any fact has been proved in this case, you may, unless otherwise instructed, consider the testimony of all witnesses, regardless of who may have called them, and all exhibits received in evidence, regardless of who may have produced them.

#### **1.1.1 CONSIDERING WITNESS TESTIMONY**

You the jurors are the sole judges of the credibility of all witnesses and the weight and effect of all evidence. By the Court allowing testimony or other evidence to be introduced over the objection of an attorney, the Court did not indicate any opinion as to the weight or effect of such evidence.

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<sup>1</sup> Source: The Court's Sample Products Liability Jury Charge provided by the Court on its website, adapted to a patent case.

When the Court sustained an objection to a question addressed to a witness, you must disregard the question entirely, and may draw no inference from the wording of it or speculate as to what the witness would have testified to, if he or she had been permitted to answer the question.

At times during the trial it was necessary for the Court to talk with the lawyers here at the bench out of your hearing, or by calling a recess. We met because often during a trial something comes up that does not involve the jury. You should not speculate on what was discussed during such times.

In determining the weight to give to the testimony of a witness, you should ask yourself whether there was evidence tending to prove that the witness testified falsely concerning some important fact, or whether there was evidence that at some other time the witness said or did something, or failed to say or do something, that was different from the testimony the witness gave before you during the trial.

You should keep in mind, of course, that a simple mistake by a witness does not necessarily mean that the witness was not telling the truth as he or she remembers it, because people may forget some things or remember other things inaccurately. So, if a witness has made a misstatement, you need to consider whether that misstatement was an intentional falsehood or simply an innocent lapse of memory; and the significance of that may depend on whether it has to do with an important fact or with only an unimportant detail.

### **1.1.2 HOW TO EXAMINE THE EVIDENCE**

Certain testimony in this case has been presented to you through a deposition. A deposition is the sworn, recorded answers to questions asked a witness in advance of the trial. Under some circumstances, if a witness cannot be present to testify from the witness stand, the witness testimony may be presented, under oath, in the form of a deposition. Some time before

this trial, attorneys representing the parties in this case questioned this witness under oath. A court reporter was present and recorded the testimony. This deposition testimony is entitled to the same consideration and is to be judged by you as to credibility and weight and otherwise considered by you insofar as possible the same as if the witness had been present and had testified from the witness stand in court.

While you should consider only the evidence in this case, you are permitted to draw such reasonable inferences from the testimony and exhibits as you feel are justified in the light of common experience. In other words, you may make deductions and reach conclusions that reason and common sense lead you to draw from the facts that have been established by the testimony and evidence in the case.

Unless you are instructed otherwise, the testimony of a single witness may be sufficient to prove any fact, even if a greater number of witnesses may have testified to the contrary, if after considering all the other evidence you believe that single witness.

There are two types of evidence that you may consider in properly finding the truth as to the facts in the case. One is direct evidence such as testimony of an eyewitness. The other is indirect or circumstantial evidence – the proof of a chain of circumstances that indicates the existence or nonexistence of certain other facts. As a general rule, the law makes no distinction between direct and circumstantial evidence, but simply requires that you find the facts based on all the evidence, both direct and circumstantial.

### **1.1.3 EXPERT WITNESS**

When knowledge of a technical subject matter may be helpful to the jury, a person who has special training or experience in that technical field is called an expert witness and is permitted to state his or her opinion on those technical matters. However, you are not required to accept that opinion. As with any other witness, it is up to you to decide whether to rely upon it.

In deciding whether to accept or rely upon the opinion of an expert witness, you may consider any bias of the witness, including any bias you may infer from evidence that the expert witness has been or will be paid for reviewing the case and testifying, or from evidence that he or she testifies regularly as an expert witness and that income from such testimony represents a significant portion of the expert's income.

## 1.2 CONTENTIONS OF THE PARTIES<sup>2</sup>

Fractus contends that Defendants make, use, offer to sell, sell or import products – specifically, antennas used in cellular phones – that infringe a number of the patent claims in the nine patents that are at issue in this case. Defendants assert that all of the asserted patent claims are invalid on one or more grounds. The patent claims at issue in this trial are as follows:

| <b>Family</b> | <b>U.S. Patent No.</b> | <b>Claims at Issue</b> |
|---------------|------------------------|------------------------|
| MLV           | 7,015,868 (868 Patent) | 26, 35                 |
| MLV           | 7,123,208 (208 Patent) | 7, 12                  |
| MLV           | 7,397,431 (431 Patent) | 14, 30                 |
| MLV           | 7,394,432 (432 Patent) | 6                      |
| MLV           | 7,528,782 (782 Patent) | 6, 7, 8                |
| SFC           | 7,148,850 (850 Patent) | 22, 70                 |
| SFC           | 7,202,822 (822 Patent) | 8                      |
| MBM           | 7,411,556 (556 Patent) | 40                     |
| LA            | 7,312,762 (762 Patent) | 21                     |

Defendants contend that the asserted claims of the nine patents that are in issue are invalid because (1) the asserted claims are anticipated by the prior art (2) the asserted claims are rendered obvious by the prior art; (3) the asserted claims do not satisfy the written description requirement; (4) the asserted claims, as written, do not satisfy the enablement requirement; and (5) the MLV patents are invalid because of improper inventorship.<sup>3</sup>

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<sup>2</sup> Source: Model Patent Jury Instructions 2.1 (modified to reflect that this phase one is on infringement only).

<sup>3</sup> Defendants also continue to assert that the patent claims are invalid on grounds of indefiniteness. However, because “indefiniteness” presents a question of law, Defendants are not submitting any jury instructions or jury interrogatory on this asserted invalidity ground.

Even though the PTO examiner has allowed the claims of the patents that are in issue, you, the jury, must decide whether the claims of those patents are invalid. Since infringement is not in issue in this trial, your only job is to decide whether the asserted claims of the above nine patents are invalid.

### 1.3 THE MEANING OF CLAIM TERMS<sup>45</sup>

I have defined certain words and phrases in the patent claims asserted here. During your deliberations you must apply these meanings:

**Multilevel structure** and **a structure** both mean “a structure for an antenna useable at multiple frequency bands with at least two levels of detail, wherein one level of detail makes up another level. These levels of detail are composed of polygons (polyhedrons) of the same type with the same number of sides (faces) wherein most of the polygons (polyhedrons) are clearly visible and individually distinguishable and most of the polygons (polyhedrons) having an area of contact, intersection or interconnection with other elements (polygons or polyhedrons) that is less than 50% of the perimeter area.”

**Polygon** and **polygonal element** mean the same thing: “a closed plane figure bounded by straight lines, further including circles and ellipses.”

**Polyhedron** and **polyhedral element** both mean “a closed solid figure bounded by polygons.”

**Geometric elements** means “polygons or polyhedrons.”

**Impedance level** and **level of impedance** both mean “the combined amount of resistance and reactance measured at the input/output connector.”

**Radioelectric behavior** and **radio characteristics and functionality** both mean “the level of impedance and radiation pattern.”

**Communication service(s)** means “a service operating at a particular frequency band.”

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<sup>4</sup> Source: Model Patent Jury Instructions 3.3; *Markman* Order (Document 622) Adopting Report and Recommendation of Magistrate Judge (Document 526); Order Denying Plaintiff’s Motion for Reconsideration of the Construction of “At Least A Portion” (Document 783).

<sup>5</sup> Defendants are not conceding, by submitting instructions reflecting the claim constructions made by the Magistrate Judge and as affirmed and revised by Court, that the claim constructions are correct. Defendants object to these instructions to the extent that are different from the claim constructions proposed by Defendants and rejected by the Court.

**Frequency band** means “a range of frequencies extending between two limiting frequencies.”

**Multiband or multi-band** are not limiting (meaning, the terms can be ignored) when used in the preamble of a claim, but when used in the body of the claims, they mean “useable at more than one frequency band.”

**Electromagnetically coupled** means the “direct or proximate linking of two or more elements in such a way that electromagnetic power is exchanged from one element to another.”

**Said first and second portions defining empty spaces in an overall structure** means “said first and second portions defining areas without conductive material in an overall structure.”

**Said first, second and third portions defining empty spaces in an overall structure** means “said first, second and third portions defining areas without conductive material in an overall structure.”

**Space-filling curve or SFC**, as used in the 762 Patent, means “a curve composed by at least ten connected straight segments, wherein said segments are smaller than a tenth of the operating free-space wavelength and they are spatially arranged in such a way that none of said adjacent and connected segments form another longer straight segment.” As used in the 850 Patent and the 556 Patent, these terms mean “a curve for the shaping part of an antenna element composed by at least ten segments which are connected in such a way that each segment forms an angle with their neighbors, that is, no pair of adjacent segments define a larger straight segment, and wherein the curve can be optionally periodic along a fixed straight direction of space if and only if the period is defined by a non-periodic curve composed by at least ten connected segments and no pair of said and adjacent and connected segments define a longer

straight segment; the space filling curve can only intersect itself, if at all, at its initial and final point; and each segment must be shorter than a tenth of the free-space operating wavelength.” For both definitions, a “segment” of a curve can only be counted once when determining whether the curve has the requisite 10 segments to make it a space-filling curve or SFC.

With respect to **at least a portion** [of the antenna is shaped as a space-filling curve], “as to arm antennas, the ‘portion’ must be the arm, and may not be the perimeter.”

**Multi-segment curve, substantially non-periodic curve, and substantially non-periodic multi-segment curve**, as used in the 822 Patent claims, means the same as “space-filling curve” or SFC, as used in the 850 Patent.

**Box-counting dimension** means as follows: “box counting refers to many methods of counting the smallest number of boxes of a defined size that are necessary to cover an object. The box-counting dimension is the logarithmic rate at which the number of boxes increase as the size of the boxes decrease.”

**Mounted on** means “secured directly or indirectly to.”

**Conducting surface** means “a polygon, a multilevel structure, or a solid surface with a space-filling perimeter.”

**Loading structure** means “at least one conducting strip connected to at least one point on an edge of the at least one conducting surface, the maximal width of the at least one conducting strip being less than a quarter of the longest straight edge of the conducting surface.”

#### 1.4 OPEN-ENDED OR “COMPRISING” CLAIMS<sup>6</sup>

The terms “comprising” or “comprised of,” when used in a patent claim, means “including” or “containing but not limited to.” That is, if you decide that a prior art reference includes all the requirements in an asserted claim, the claim is invalid. This is true even if the prior art reference includes components in addition to those requirements.

For example, a claim to a table *comprising* a tabletop, legs, and glue would be invalidated by a prior art table that includes a tabletop, legs, and glue, even if the table also includes wheels on the table’s legs.

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<sup>6</sup> Source: Model Patent Jury Instructions 3.4 (modified to take out references to infringement); *CIAS, Inc. v. Alliance Gaming Corp.*, 504 F.3d 1356, 1361 (Fed. Cir. 2007) (holding that “comprised of” has the same open-ended meaning as “comprising.”); *Genentech, Inc. v. Chiron Corp.*, 112 F.3d 495, 501 (Fed. Cir. 1997)

## 1.5 DEPENDENT CLAIMS<sup>7</sup>

So far, my instructions have applied to what are known as independent claims. The patents at issue here also contain a number of dependent claims.

An independent claim is a claim that does not refer to any other claim of the patent. An independent claim must be read separately from other claims to determine the scope of the claim.

A dependent claim is a claim that depends upon at least one other claim in the patent. A dependent claim is ultimately dependent, directly or indirectly, on an independent claim. A dependent claim may also be dependent on one or more intervening claims. A dependent claim incorporates (1) all of the elements of the independent claim upon which it depends, (2) all of the elements of any intervening claims upon which it depends, and (3) the elements recited in the dependent claim itself.

In order to invalidate a dependent claim for anticipation or obviousness, you must first determine whether the claim or claims upon which the dependent claim depends have been invalidated for anticipation or obviousness. If you decide that any claim upon which the dependent claim depends has not been invalidated for anticipation or obviousness, then the dependent claim cannot have been invalidated for anticipation or obviousness. If you decide that every claim upon which the dependent claim depends has been invalidated for anticipation or obviousness, you must then separately determine whether each additional requirement of the

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<sup>7</sup> Source: Model Patent Jury Instructions, 3.7 (adapted to apply to invalidity and modified to reflect multiple levels of dependency); AIPLA's Model Patent Jury Instructions, 3.6 (adapted to apply to invalidity and modified to reflect multiple levels of dependency); *Wolverine World Wide v. Nike Inc.*, 38 F.3d 1192, 1196-99 (Fed. Cir. 1994) (citing *Johnston v. IVAC Corp.*, 885 F.2d 1574, 1577-89 (Fed. Cir. 1989)); *Wilson Sporting Goods v. David Geoffrey & Assocs.*, 904 F.2d 677, 685-86 (Fed. Cir. 1990); *Wahpeton Canvas Co., Inc. v. Frontier, Inc.*, 870 F.2d 1546, 1552-53 nn.9&10 (Fed. Cir. 1989); *Shatterproof Glass Corp. v. Libbey-Owens Ford Co.*, 758 F.2d 613, 626 (Fed. Cir. 1985).

dependent claim is invalid for anticipation or obviousness. If each additional requirement is anticipated or obviousness, then the dependent claim has been invalidated.

For example, suppose Claim 1 was directed to “A table, comprising a flat surface supported by 5 legs.” Claim 2 was “The table of claim 1, wherein the table legs are made of metal.” Claim 3 was “The table of Claim 2, wherein the legs have wheels on them.” A single prior art reference does not invalidate Claim 3 by disclosing only a table with wheels on the legs. Because Claim 3 depends upon Claim 2 which depends upon Claim 1, to invalidate Claim 3, the prior art table must have wheels on the legs, have legs made of metal, and have 5 legs supporting a flat surface. In other words, it must have all the limitations of the dependent claim and all other claims to which it refers.

## 1.6 INVALIDITY—GENERALLY<sup>8</sup>

Even though the PTO examiner has allowed the claims of a patent, you have the ultimate responsibility for deciding whether the claims of the patent are valid.

I will now instruct you on the invalidity issues you should consider. When determining whether the patents are invalid based on prior art presented to you that was not considered by the PTO, the burden of proving invalidity is a preponderance of the evidence. Otherwise, the Defendants must prove invalidity by clear and convincing evidence. This is a higher standard than a preponderance of the evidence, but it does not require proof beyond a reasonable doubt. Clear and convincing evidence is evidence that shows it is highly probable that the claims are invalid.<sup>9</sup>

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<sup>8</sup> Source: Model Patent Jury Instructions 5.1 (modified to change burden of proof and to preserve claim that invalidity need only be proven by a preponderance of the evidence); 35 U.S.C. § 282; *see* Cause No. 10-290, *Microsoft Corporation v. i4i Limited Partnership*, in the United States Supreme Court (cert. granted to consider whether burden of proof for invalidity should be clear and convincing evidence or preponderance of the evidence).

<sup>9</sup> Source: *Futorian Mfg. Corp. v. Dual Mfg. & Eng'g, Inc.*, 528 F.2d 941, 943-44 (1st Cir. 1976); *Rains v. Niaqua, Inc.*, 406 F.2d 275, 278 (2d. Cir. 1969); *A.B. Baumstimler v. Rankin*, 677 F.2d 1061, 1066, 1068 (5th Cir. 1982); *Eltra Corp. v. Basic Inc.*, 599 F.2d 745, 750 (6th Cir. 1979); *Dickey-John Corp. v. Int'l Tapetronics Corp.*, 710 F.2d 329, 337 (7th Cir. 1983); *Rite-Nail Packaging Corp. v. Berryfast, Inc.*, 706 F.2d 933, 935 (9th Cir. 1983); *Mfg. Research Corp. v. Graybar Elec. Co.*, 679 F.2d 1355, 1360-61, 1363-64 (11th Cir. 1982).

## 1.7 WRITTEN DESCRIPTION<sup>10</sup>

Defendants contend that all of the asserted patent claims are invalid for failure of the patents to provide an adequate written description of the claimed invention. Defendants must prove that it is highly probable that these claims lacked an adequate written description.

To satisfy the written description requirement, the applicant must convey with reasonable clarity to those skilled in the art, as of the filing date sought, that he or she was in possession of the invention, and demonstrate that by disclosure within the original patent application itself. In order to satisfy the written description requirement with respect to a range, the original patent application must direct the person of ordinary skill in the art to that particular range.<sup>11</sup>

Assessing such possession as shown in the disclosure requires an objective inquiry into the four corners of the specification. Ultimately, the specification must describe an invention understandable to a person of ordinary skill in the art and show that the inventor actually invented the invention claimed. A mere wish or plan for obtaining the claimed invention is not adequate written description.

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<sup>10</sup> Source: Model Patent Jury Instructions 5.2 (modified to reflect the Federal Circuit's decision in *Centocor Ortho Biotech, Inc.*, \_\_\_ F.3d \_\_\_, 2011 WL 635291, \*5 (Fed. Cir. Feb. 23, 2011) and *Ariad Pharm., Inc. v. Eli Lilly & Co.*, 598 F.3d 1336, 1351 (Fed. Cir. 2010) (en banc)).

<sup>11</sup> *Purdue Pharma L.P. v. Faulding Inc.*, 230 F.3d 1320, 1326-27 (Fed. Cir. 2000) (holding that "one cannot disclose a forest in the original application, and then later pick a tree out of the forest and say here is my invention. In order to satisfy the written description requirement, the blaze marks directing the skilled artisan to that tree must be in the originally filed disclosure"); *PowderMagic, Ltd. v. Rossignol Ski Co.*, No. 1:04CV00133, 2005 WL 3981617, at \*3 (D. Utah Aug. 4, 2005) (finding lack of written description support for narrow range based on disclosure of broad range); *Nelson v. K2 Inc.*, C07-1660RSL, 2008 WL 4603409, at \*1-\*3 (W.D. Wash. Oct. 15, 2008) (same).

A description that renders obvious a claimed invention is not sufficient to satisfy the written description requirement of that invention.<sup>12</sup> When claim language is broad, a patentee cannot always satisfy the written description requirement merely by clearly describing one embodiment of the thing claimed.<sup>13</sup> A single embodiment supports a generic claim only if the specification reasonably conveyed to a person of ordinary skill in the art that the inventor had possession of the claimed subject matter at the time of filing of the original disclosure, and enabled one of ordinary skill to practice the full scope of the claimed invention.<sup>14</sup> If you find that one or more of the claims challenged by Defendants lacked an adequate written description, you must find each such claim invalid.

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<sup>12</sup> *Ariad Pharms., Inc. v. Eli Lilly & Co.*, 598 F.3d 1336, 1356 (Fed. Cir. 2010) (en banc) (“[A] description which renders obvious a claimed invention is not sufficient to satisfy the written description requirement of that invention.”) (quoting *Regents of the Univ. of Cal. v. Eli Lilly & Co.*, 119 F.3d 1559, 1567 (Fed. Cir. 1997)).

<sup>13</sup> *LizardTech, Inc. v. Earth Resource Mapping, Inc.*, 424 F.3d 1336, 1346 (Fed. Cir. 2005) (holding that “a patentee cannot always satisfy the requirements of section 112, in supporting expansive claim language, merely by clearly describing one embodiment of the thing claimed”).

<sup>14</sup> *LizardTech, Inc. v. Earth Resource Mapping, Inc.*, 424 F.3d 1336, 1346 (Fed. Cir. 2005) (“The single embodiment would support such a generic claim only if the specification would reasonably convey to a person skilled in the art that the inventor had possession of the claimed subject matter at the time of filing, . . . and would enable one of ordinary skill to practice the full scope of the claimed invention.”) (quotation marks, brackets, and citations omitted) (citing *Bilstad v. Wakalopoulos*, 386 F.3d 1116, 1125 (Fed. Cir. 2004), *Chiron Corp. v. Genentech, Inc.*, 363 F.3d 1247, 1253 (Fed. Cir. 2004); *In re Wright*, 999 F.2d 1557, 1561 (Fed. Cir. 1993); *PPG Indus., Inc. v. Guardian Indus. Corp.*, 75 F.3d 1558, 1564 (Fed. Cir. 1996)).

## 1.8 ENABLEMENT<sup>15</sup>

Defendants contend that all of the asserted patent claims are invalid because the patent does not disclose sufficient information to enable one skilled in the field of the invention, at the time the application was filed (or its effective filing date), to make and use the full scope of the claimed invention. This requirement is known as the enablement requirement. If a patent claim is not enabled, it is invalid. Each claim must be analyzed for compliance with the enablement requirement. Defendants must prove that it is highly probable that the claim was not enabled.

In considering whether a patent claim satisfies the enablement requirement, you must keep in mind that patents are written for persons of skill in the field of the invention. Thus, a patent need not expressly state information that skilled persons would be likely to know or could obtain. Defendants bear the burden of establishing lack of enablement by showing that it is highly probable that a person skilled in the art, upon reading the patent document, would not be able to make the invention work without undue experimentation.

When claim language is broad, a patentee cannot always satisfy the enablement requirement merely by clearly describing one embodiment of the thing claimed.<sup>16</sup> A single embodiment supports a generic claim only if the specification reasonably conveyed to a person

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<sup>15</sup> Source: Model Patent Jury Instructions 5.3 (modified to incorporate teaching of *Automotive Technologies Int'l, Inc. v. BMW of N. America, Inc.*, 502 F.3d 1274, 1283-84 (Fed. Cir. 2007)); *AK Steel Corp. v. Sollac & Ugine*, 344 F.3d 1234, 1244 (Fed. Cir. 2003); *Durel Corp. v. Osram Sylvania Inc.*, 256 F.3d 1298, 1306 (Fed. Cir. 2001); *Union Pac. Res. Co. v. Chesapeake Energy Corp.*, 236 F.3d 684, 690-92 (Fed. Cir. 2001); *Ajinomoto Co. v. Archer-Daniels-Midland Co.*, 228 F.3d 1338, 1345-46 (Fed. Cir. 2000); *Nat'l Recovery Techs., Inc. v. Magnetic Separation Sys., Inc.*, 166 F.3d 1190, 1195-98 (Fed. Cir. 1999); *Enzo Biochem, Inc. v. Calgene, Inc.*, 188 F.3d 1362, 1371 (Fed. Cir. 1999); *In re Wands*, 858 F.2d 731, 737 (Fed. Cir. 1988); *Spectra-Physics, Inc. v. Coherent, Inc.*, 827 F.2d 1524, 1533 (Fed. Cir. 1987); *White Consol. Indus., Inc. v. Vega Servo Control, Inc.*, 713 F.2d 788, 791 (Fed. Cir. 1983)

<sup>16</sup> *LizardTech, Inc. v. Earth Resource Mapping, Inc.*, 424 F.3d 1336, 1346 (Fed. Cir. 2005) (holding that “a patentee cannot always satisfy the requirements of section 112, in supporting expansive claim language, merely by clearly describing one embodiment of the thing claimed”).

of ordinary skill in the art that the inventor had possession of the claimed subject matter at the time of filing of the original disclosure, and enabled one of ordinary skill to practice the full scope of the claimed invention.<sup>17</sup>

The fact that some experimentation may be required for a skilled person to make or use the claimed invention does not mean that a patent's written description fails to meet the enablement requirement. Factors you may consider in determining whether making the invention would require undue experimentation include:

1. the quantity of experimentation necessary;
2. the amount of direction or guidance disclosed in the patent;
3. the presence or absence of working examples in the patent;
4. the nature of the invention;
5. the state of the prior art;
6. the relative skill of those in the art;
7. the predictability of the art; and
8. the breadth of the claims.

Although you may consider the knowledge of one skilled in the art in determining whether a patent is enabling, it is the patent's specification, not the knowledge of one skilled in the art, that must supply the novel aspects of an invention in order to constitute adequate enablement. If the patent specification does not provide a sufficient enabling disclosure of the novel aspects of the invention, the knowledge of one skilled in the art is insufficient to supply the missing information.

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<sup>17</sup> *LizardTech, Inc. v. Earth Resource Mapping, Inc.*, 424 F.3d 1336, 1346 (Fed. Cir. 2005) ("The single embodiment would support such a generic claim only if the specification would reasonably convey to a person skilled in the art that the inventor had possession of the claimed subject matter at the time of filing, . . . and would enable one of ordinary skill to practice the full scope of the claimed invention.") (quotation marks, brackets, and citations omitted) (citing *Bilstad v. Wakalopoulos*, 386 F.3d 1116, 1125 (Fed. Cir. 2004), *Chiron Corp. v. Genentech, Inc.*, 363 F.3d 1247, 1253 (Fed. Cir. 2004); *In re Wright*, 999 F.2d 1557, 1561 (Fed. Cir. 1993); *PPG Indus., Inc. v. Guardian Indus. Corp.*, 75 F.3d 1558, 1564 (Fed. Cir. 1996)).

If you find that one or more of these claims did not comply with the enablement requirement, you must find each such claim invalid.

### 1.9 ANTICIPATION—PUBLICLY USED OR KNOWN, OR PREVIOUSLY PUBLISHED<sup>18</sup>

Defendants contend that all asserted claims of the nine patents in issue are invalid because the claimed invention is not new. For a claim to be invalid because it is not new, all of its requirements must have existed in a single device or method that predates the claimed invention, or must have been described in a single previous publication or patent that predates the claimed invention. In patent law, such previous device, method, publication or patent is called a “prior art reference.” If a patent claim is not new we say it is “anticipated” by a prior art reference. When determining whether the patents are invalid based on prior art presented to you that was not considered by the PTO, the burden of proving invalidity is a preponderance of the evidence.<sup>19</sup> Otherwise, the Defendants must prove invalidity by clear and convincing evidence. This is a higher standard than a preponderance of the evidence, but it does not require proof beyond a reasonable doubt. Clear and convincing evidence is evidence that shows it is highly probable that the claims are invalid.<sup>20</sup>

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<sup>18</sup> Source: Model Patent Jury Instructions 5.5 & 5.6 (modified to change burden of proof to preponderance of the evidence); 35 U.S.C. § 102(a), (c), (e), (f) and (g); *Lacks Industries, Inc. v. McKechnie Vehicle Components USA, Inc.*, 322 F.3d 1335 (Fed. Cir. 2003); *Apotex U.S.A., Inc. v. Merck & Co.*, 254 F.3d 1031, 1035 (Fed. Cir. 2001); *Mycogen Plant Science, Inc. v. Monsanto Co.*, 243 F.3d 1316, 1330 (Fed. Cir. 2001); *Ecolochem, Inc. v. S. Cal. Edison Co.*, 227 F.3d 1361, 1367-70 (Fed. Cir. 2000); *Singh v. Brake*, 222 F.3d 1362, 1366-70 (Fed. Cir. 2000); *Gambro Lundia AB v. Baxter Healthcare Corp.*, 110 F.3d 1573, 1576-78 (Fed. Cir. 1997); *In re Bartfeld*, 925 F.2d 1450 (Fed. Cir. 1985); *Lamb-Weston, Inc. v. McCain Foods, Ltd.*, 78 F.3d 540, 545 (Fed. Cir. 1996); *Ralston Purina Co. v. Far-Mar-Co, Inc.*, 772 F.2d 1570, 1574 (Fed. Cir. 1985); *American Stock Exch., LLC v. Mopies*, 250 F. Supp. 2d 323 (S.D.N.Y. 2003); *In re Wyer*, 655 F.2d 221, 226 (C.C.P.A. 1981).

<sup>19</sup> Defendants request an instruction that the burden of proof is merely more probable than not for art that was not before the PTO. See Cause No. 10-290, *Microsoft Corporation v. i4i Limited Partnership*, in the United States Supreme Court (cert. granted to consider whether burden of proof for invalidity should be clear and convincing evidence or preponderance of the evidence).

<sup>20</sup> Source: *Futorian Mfg. Corp. v. Dual Mfg. & Eng'g, Inc.*, 528 F.2d 941, 943-44 (1st Cir. 1976); *Rains v. Niaqua, Inc.*, 406 F.2d 275, 278 (2d Cir. 1969); *A.B. Baumstimler v. Rankin*, 677 F.2d 1061, 1066, 1068 (5th Cir. 1982); *Eltra Corp. v. Basic Inc.*, 599 F.2d 745, 750 (6th Cir. 1979); *Dickey-John Corp. v. Int'l Tapetronics Corp.*, 710 F.2d 329, 337 (7th Cir. 1983); *Rite-*

The disclosure in the prior art reference does not have to be in the same words as the claim, but all of the requirements of the claim must be there, either stated or necessarily implied, so that someone of ordinary skill in the field of the design and use of antennas looking at that one reference (including the drawings or figures) would be able to make and use at least one embodiment of the claimed invention.

Anticipation also occurs when the claimed invention inherently (necessarily) results from practice of what is disclosed in the written reference, even if the inherent disclosure was unrecognized or unappreciated by one of ordinary skill in the field of the invention.

Here is a list of the ways that Defendants can show that a patent claim was not new.

- (1) A patent claim is not new if the claimed invention was already publicly known or publicly used by others in the United States before the date of invention.
- (2) A patent claim is also not new if the claimed invention was already patented or described in a printed publication anywhere in the world before the date of invention. To qualify as a prior art reference, a “printed publication” must be at least reasonably accessible to those interested in the field, even if it is difficult to find. A single cataloged thesis in one university library may be a printed publication. An electronic publication, including an on-line or internet publication, is a “printed publication” if it is at least reasonably accessible to those interested in the field even if it is difficult to find.
- (3) A patent claim is not new if the claimed invention was already described in another published U.S. patent application or issued U.S. patent that was based on a patent application filed before or the date of invention.

The date of the invention is presumed to be the effective filing date of the patent in which the invention is claimed. This presumption may be rebutted by plaintiff to show an earlier date with a showing of (1) reduction to practice prior to the effective date of the reference, or (2) conception of the invention prior to the effective date of the reference coupled with reasonable

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*Nail Packaging Corp. v. Berryfast, Inc.*, 706 F.2d 933, 935 (9th Cir. 1983); *Mfg. Research Corp. v. Graybar Elec. Co.*, 679 F.2d 1355, 1360-61, 1363-64 (11th Cir. 1982).

diligence from prior to said date to a subsequent reduction to practice or to the filing of the application.<sup>21</sup>

Since it is in dispute, you must determine a date of invention for each of the claimed inventions. In order to do so, you must determine a date of conception and reduction to practice for the claimed invention and whether the named inventors were reasonably diligent in reducing the invention to practice. Conception is the formation in the mind of the inventor, of a definite and permanent idea of the complete and operative invention, as it is to be applied in practice. Reduction to practice occurs either as of the filing of the patent application or when the invention was actually made and was shown to work for its intended purpose. Reasonable diligence means that the inventor worked continuously on reducing the invention to practice. Interruptions necessitated by the everyday problems and obligations of the inventor or others working with him or her do not prevent a finding of reasonable diligence.

***Corroboration of Oral Testimony***<sup>22</sup>

Oral testimony alone is insufficient to prove an earlier date of invention. A party seeking to prove an earlier date of invention also must provide evidence that corroborates any oral testimony, especially where the oral testimony comes from an interested witness, or a witness testifying on behalf of an interested party. This includes any individual or company testifying that his, her or its invention predates a prior art reference. Documentary or physical evidence that is made contemporaneously with the inventive process provides the most reliable proof that the inventor's testimony has been corroborated. For any oral testimony that a party has put forth alleging that a particular event or reference occurred before the filing date of a patent-in-suit, that

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<sup>21</sup> 37 C.F.R. 1.131

<sup>22</sup> Source: *i4i Limited Partnership vs. Microsoft*, Case 07-cv-00113-LED, *Court's Charge*, Docket Entry 323 (May 19, 2009) (adapted for providing oral testimony of an earlier date of invention).

party must also have provided some sort of corroborating evidence that agrees with that oral testimony. If you find that the party has not corroborated the oral testimony with other evidence, you are not permitted to find that the subject of that oral testimony supports an earlier date of invention.

If evidence is presented for purposes of attempting to corroborate oral testimony, then you must determine whether this evidence does, in fact, properly corroborate the oral testimony. In making this determination, you should consider the following factors:

- (1) The relationship between the corroborating witness and the inventor(s);
- (2) The time period between the event and this trial;
- (3) The interest of the corroborating witness in the subject matter of this suit;
- (4) Contradiction or impeachment of the witness's testimony;
- (5) Extent and detail of the corroborating witness's testimony;
- (6) The witness's familiarity with the subject matter of the patented invention; and
- (7) Probability that an earlier date of invention is possible considering the state of the art at the time.

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If a patent claim is not new as explained above, you must find that patent claim invalid.

**1.10 ANTICIPATION—STATUTORY BARS<sup>23</sup>**

Defendants may prove that asserted claims of the nine patents at issue are invalid by showing that it is more probable than not that each such claim failed to meet one of several statutory provisions in the patent laws when based on prior art presented to you that was not considered by the PTO.<sup>24</sup> Otherwise, the Defendants must prove invalidity by clear and convincing evidence. This is a higher standard than a preponderance of the evidence, but it does not require proof beyond a reasonable doubt. Clear and convincing evidence is evidence that shows it is highly probable that the claims are invalid.<sup>25</sup>

These provisions are called “statutory bars.” For a patent claim to be invalid because of a statutory bar, all of its requirements must have been present in one prior art reference dated more than one year before the effective filing date of the patent application.

Here is a list of ways the Defendants can show that the patent application was not timely filed, that is, filed within one year of the occurrence of any of the following events:

- (1) A patent application is not timely if the claimed invention was already patented or described in a printed publication anywhere in the world, including by one of the

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<sup>23</sup> Source: Model Patent Jury Instructions 5.7 (modified to change burden of proof to preponderance of the evidence)); 35 U.S.C. § 102(b) and (d); *Pfaff v. Wells Elec. Inc.*, 525 U.S. 55 (1998); *Schering Corp. v. Geneva Pharms.*, 339 F.2d 1373 (Fed Cir. 2003); *Helifix Ltd. v. Blok-Lok, Ltd.*, 208 F.3d 1339, 1346 (Fed. Cir. 2000); *Abbot Labs. v. Geneva Pharms., Inc.*, 182 F.3d 1315, 1318 (Fed. Cir. 1999); *Finnigan Corp. v. Int’l Trade Comm’n*, 180 F.3d 1354 (Fed. Cir. 1999); *J.A. LaPorte, Inc. v. Norfolk Dredging Co.*, 787 F.2d 1577, 1581 (Fed. Cir. 1986); *In re Hall*, 781 F.2d 897, 898-99 (Fed. Cir. 1986); *D.L. Auld Co. v. Chroma Graphics Corp.*, 714 F.2d 1144, 1150 (Fed. Cir. 1983).

<sup>24</sup> Defendants request an instruction that the burden of proof is merely more probable than not for art that was not before the PTO. See Cause No. 10-290, *Microsoft Corporation v. i4i Limited Partnership*, in the United States Supreme Court (cert. granted to consider whether burden of proof for invalidity should be clear and convincing evidence or preponderance of the evidence).

<sup>25</sup> Source: *Futorian Mfg. Corp. v. Dual Mfg. & Eng’g, Inc.*, 528 F.2d 941, 943-44 (1st Cir. 1976); *Rains v. Niaqua, Inc.*, 406 F.2d 275, 278 (2d Cir. 1969); *A.B. Baumstimler v. Rankin*, 677 F.2d 1061, 1066, 1068 (5th Cir. 1982); *Eltra Corp. v. Basic Inc.*, 599 F.2d 745, 750 (6th Cir. 1979); *Dickey-John Corp. v. Int’l Tapetronics Corp.*, 710 F.2d 329, 337 (7th Cir. 1983); *Rite-Nail Packaging Corp. v. Berryfast, Inc.*, 706 F.2d 933, 935 (9th Cir. 1983); *Mfg. Research Corp. v. Graybar Elec. Co.*, 679 F.2d 1355, 1360-61, 1363-64 (11th Cir. 1982).

inventors, more than one year before the effective filing date of the patent application. A reference is a “printed publication” if it is reasonably accessible to those interested in the field, even if it is difficult to find. A single cataloged thesis in one university library may be a printed publication. An electronic publication, including an on-line or internet publication, is a “printed publication” if it is at least reasonably accessible to those interested in the field, even if it is difficult to find.

- (2) A patent application is not timely if the claimed invention was already being publicly or commercially used in the United States more than one year before the effective filing date of the patent application and that use was not primarily an experimental use controlled by the inventor to test whether the invention worked for its intended purpose.
- (3) A patent application is not timely if a device or method using the claimed invention was sold or offered for sale in the United States, and that claimed invention was ready for patenting, more than one year before application filing date. The claimed invention is not being sold or offered for sale if the patent holder shows that the sale or offer for sale was primarily experimental. The claimed invention is ready for patenting if it was actually built, or if the inventor had prepared drawings or other descriptions of the claimed invention that were sufficiently detailed to enable a person of ordinary skill in the field of the invention to make and use the invention based on them.
- (4) A patent application is not timely if the patent holder had already obtained a patent on the claimed invention in a foreign country before filing the original U.S. application, and the foreign application was filed more than one year before the effective filing date of the U.S. application.

For a claim to be invalid because of a statutory bar, all of the claimed requirements must have been either (1) disclosed in a single prior art reference or (2) implicitly disclosed in a single prior art reference as viewed by one of ordinary skill in the field of antennas. The disclosure in a reference does not have to be in the same words as the claim, but all of the requirements of the claim must be described in enough detail, or necessarily implied by or inherent in the reference, to enable someone of ordinary skill in the field of the invention looking at the reference to make and use at least one embodiment of the claimed invention.

A prior art reference also invalidates a patent claim when the claimed invention necessarily results from practice of the subject of the prior art reference, or when the prior art

reference necessarily contains a property of the claimed invention, even if the result or property was unrecognized and unappreciated by one of ordinary skill in the field of the invention.

If you find a patent claim failed to meet a statutory bar, you must find the patent claim invalid.

**1.11 IMPROPER INVENTORSHIP<sup>26</sup>**

In this case, defendants contend that all claims of the MLV patents are invalid because of improper inventorship. To prove invalidity because of improper inventorship, defendants must show that it is highly probable that the patent fails to meet the requirement that all of the actual inventors, and only the actual inventors, be named as inventors in the patent. This is known as the “inventorship” requirement. In determining whether the inventorship requirement has been satisfied here, you should be guided by the following principles.

To be an inventor, one must make a significant contribution to the conception of one or more of the claims of the patent. Whether the contribution is significant is measured against the scope of the full invention.

Conception is the mental formulation and disclosure by the inventor(s) of a complete idea of the inventive solution. An inventive solution is considered to be a complete idea when disclosure of the idea would enable anyone with ordinary skill in the pertinent art to reduce the invention to practice.

Persons may be inventors even if they do not physically work together, make the same type or amount of contribution, or contribute to the subject matter of every claim of the patent. While persons may be joint or co-inventors even though they do not physically work together, they must have some open line of communication during or at approximately the time of their inventive effort.

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<sup>26</sup> Source: Model Patent Jury Instructions 5.8; 35 U.S.C. § 116 and 35 U.S.C. § 256; *Eli Lilly & Co. v. Aradigm*, 376 F.3d 1352, 1358-59 (Fed. Cir. 2004); *Slip Track Sys., Inc. v. Metal-Lite, Inc.*, 304 F.3d 1256, 1262-63 (Fed. Cir. 2002); *Hess v. Advanced Cardiovascular Sys., Inc.*, 106 F.3d 976, 980 (Fed. Cir. 1997); *Burroughs Wellcome Co. v. Barr Labs., Inc.*, 40 F.3d 1223, 1227-28 (Fed. Cir. 1994); *Shatterproof Glass Corp. v. Libbey-Owens Ford Co.*, 758 F.2d 613, 624 (Fed. Cir. 1985).

Explaining to the actual inventors well-known concepts or the current state of the art does not make someone an inventor. Likewise, merely helping with experimentation, by carrying out the inventor's instructions, does not make someone an inventor.

### 1.12 OBVIOUSNESS<sup>27</sup>

In this case, Defendants also contend that all asserted claims of the nine patents at issue are invalid as obvious. A patent claim is invalid if the claimed invention would have been obvious to a person of ordinary skill in the field of the invention at the time the application was filed. This means that even if all the requirements of the claim cannot be found in a single prior art reference that would anticipate the claim or constitute a statutory bar to that claim, a person of ordinary skill in the field of the invention who knew about all of the prior art would have come up with the claimed invention.

A patent claim composed of several requirements is not proved obvious merely by demonstrating that each of its requirements was independently known in the prior art. Although common sense directs one to look with care at a patent application that claims as innovation the combination of known requirements according to their established functions to produce a predictable result, it can be important to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the requirements in the way the claimed new invention does. This is so because inventions in most, if not all, instances rely upon building blocks long since uncovered, and claimed discoveries almost of necessity will be combinations of what, in some sense, is already known. Accordingly, you may evaluate whether there was some teaching, suggestion, or motivation to arrive at the claimed invention before the time of the claimed invention, although proof of this is not a requirement to prove obviousness. Teachings,

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<sup>27</sup> Source: Model Patent Jury Instructions 5.9 (modified to reflect preponderance of evidence burden of proof); 35 U.S.C. § 103; *KSR Int'l Co. v. Teleflex, Inc.*, 550 U.S. 398, 425-28 (2007); *Graham v. John Deere Co.*, 383 U.S. 1 (1966); *In re Fulton*, 391 F.3d 1195, 1201 (Fed. Cir. 2004); *Ruiz v. A.B. Chance Co.*, 234 F.3d 654 (Fed. Cir. 2000); *Arkie Lures, Inc. v. Gene Larew Tackle, Inc.*, 119 F.3d 953, 957 (Fed. Cir. 1997); *Lamb-Weston, Inc. v. McCain Foods, Ltd.*, 78 F.3d 540, 545 (Fed. Cir. 1996); *Ryco Mfg. Co. v. Nu-Star, Inc.*, 950 F.2d 714, 716 (Fed. Cir. 1991); *Windsurfing Int'l, Inc. v. AMF, Inc.*, 782 F.2d 995, 1000 (Fed. Cir. 1986); *Pentec, Inc. v. Graphic Controls Corp.*, 776 F.2d 309, 313 (Fed. Cir. 1985); *In re Wood*, 599 F.2d 1032, 1036 (CCPA 1979).

suggestions, and motivations may be found in written references including the prior art itself. However, teachings, suggestions, and motivations may also be found within the knowledge of a person with ordinary skill in the art including inferences and creative steps that a person of ordinary skill in the art would employ. Additionally, teachings, suggestions, and motivations may be found in the nature of the problem solved by the claimed invention, or any need or problem known in the field of the invention at the time of and addressed by the invention.

Therefore, in evaluating whether such a claim would have been obvious, you should consider a variety of factors:

1. Whether Defendants have identified a reason that would have prompted a person of ordinary skill in the field of the invention to combine the requirements or concepts from the prior art in the same way as in the claimed invention. There is no single way to define the line between true inventiveness on one hand (which is patentable) and the application of common sense and ordinary skill to solve a problem on the other hand (which is not patentable). For example, market forces or other design incentives may be what produced a change, rather than true inventiveness.
2. Whether the claimed invention applies a known [or conventional]<sup>28</sup> technique that had been used to improve a similar device or method in a similar way.
3. Whether the claimed invention would have been obvious to try, meaning that the claimed innovation was one of a relatively small number of possible approaches to the problem with a reasonable expectation of success by those skilled in the art.

But you must be careful not to determine obviousness using hindsight; many true inventions can seem obvious after the fact. You should put yourself in the position of a person of ordinary skill in the field of the invention at the time the claimed invention was made, and you should not consider what is known today or what is learned from the teaching of the patent.

The ultimate conclusion of whether a claim is obvious should be based on your determination of several factual issues:

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<sup>28</sup> See *In re Kubin*, 561 F.3d 1351, 1356 (Fed. Cir. 2009) (affirming a judgment of obviousness because the Patent Office “had substantial evidence to conclude that appellants used conventional techniques” to modify the prior art to result in the claimed invention).

1. You must decide the level of ordinary skill in the field of the invention that someone would have had at the time the claimed invention was made.
2. You must decide the scope and content of the prior art. In determining the scope and content of the prior art, you must decide whether a reference is pertinent, or analogous, to the claimed invention. Pertinent, or analogous, prior art includes prior art in the same field of endeavor as the claimed invention, regardless of the problems addressed by the reference, and prior art from different fields reasonably pertinent to the particular problem with which the claimed invention is concerned. Remember that prior art is not limited to patents and published materials, but includes the general knowledge that would have been available to one of ordinary skill in the field of the invention.
3. You must decide what difference, if any, existed between the claimed invention and the prior art.

Finally, you should consider any of the following factors that you find have been shown by the evidence:

A. The following factors, if proven by Fractus to have a sufficient nexus to the claimed invention,<sup>29</sup> tend show nonobviousness:

1. commercial success of a product due to the merits of the claimed invention; (However, commercial success can support nonobviousness only if evidence is presented that indicates that the success was a result of the claimed invention rather than other economic or commercial factors. Commercial success may be attributed to the patented invention based on commercial success of a marketed product only where the marketed product embodies the features in the patent claim and is coextensive with the features in the patent claim. Further, to prove commercial success, evidence must be presented that indicates the success within the market; evidence that only indicates numbers of units sold is insufficient to establish commercial success. To indicate commercial success, the evidence must also show that sales are not the result of good marketing or features of the product other than those found in the claim. Finally, to support nonobviousness, commercial success may not be based on an element in the prior art.<sup>30</sup>)

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<sup>29</sup> *Cable Electric Prods. v. Genmark*, 770 F.2d 1015, 1026 (Fed. Cir. 1985) (a nexus between the merits of the claimed invention and secondary considerations must be shown).

<sup>30</sup> *Muniauction, Inc. v. Thomson Corp.*, 532 F.3d 1318, 1327-28 (Fed. Cir. 2008) (“For us to accord substantial weight to the secondary considerations proffered . . . [a] nexus between the merits of the claimed invention and evidence of secondary considerations is required[.] Put another way, commercial success or other secondary considerations may presumptively be

2. a long-felt, but unsolved, need for the solution provided by the claimed invention; (However, to be relevant to nonobviousness, a need must correspond to the claims of the patents and be satisfied by the invention. The need also must be both long felt and unsolved. If the alleged need had been met by prior art machines, the need cannot be said to have been unsolved. Moreover, where the differences between the prior art and the claimed invention are minimal, it cannot be said that any long-felt need was unsolved.<sup>31</sup>)
3. unsuccessful attempts by others to find the solution provided by the claimed invention; (However, in order for evidence of failure of others to serve as an indication of nonobviousness, it must be shown that the prior attempts failed because they lacked the claimed features of the patents. If not, the evidence of failure of others is inadequate to raise any doubt as to the obviousness of the claimed inventions.<sup>32</sup>)
4. copying of the claimed invention by others; (However, Copying, by itself, does not necessarily indicate nonobviousness. This is because copying could have occurred out of a general lack of concern for patent property in which case you should not consider it as weighing for or against the nonobviousness of a patent. Further, in order for the alleged copying to

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attributed to the patented invention only where the marketed product embodies the claimed features, and is coextensive with them.”) (internal quotations omitted) (cited references omitted); *In re Baxter Travenol Labs*, 952 F.2d 388, 392 (Fed. Cir. 1991) (“[I]nformation solely on numbers of units sold is insufficient to establish commercial success.”); *In re DBC*, 545 F.3d 1373, 1384 (Fed. Cir. 2008) (observing that sales must be a direct result of the unique characteristics of the claimed invention and not other economic and commercial factors); *Tokai Corp. v. Easton Enters., Inc.*, Nos. 2010-1057, -1116, 2011 WL 308370, \*8 (Fed. Cir. Jan. 31, 2011) (“If commercial success is due to an element in the prior art, no nexus exists.”).

<sup>31</sup> *Media Techs. Licensing, LLC v. Upper Deck Co.*, 596 F.3d 1334, 1338-39 (Fed. Cir. 2010) (“[T]he need does not correspond to the asserted claims because it is overbroad. . . . Media Tech cannot have it both ways with: (1) an overbroad “long felt but unsolved need” of “stimulat[ing] demand”; and (2) an exceedingly narrow definition of success that requires a trading card insert to raise demand to levels achieved by the alleged-infringing products.”); *Geo M. Martin Co. v. Alliance Mach. Sys. Int’l LLC*, 618 F.3d 1294, 1304-05 (Fed. Cir. 2010) (“Where the differences between the prior art and the claimed invention are as minimal as they are here, however, it cannot be said that any long-felt need was unsolved. Martin presented evidence that its Quik-Break worked better than any prior art system because, for example, it could simultaneously break three bundles or more. The record shows, however, that this “need” had been met by prior art machines such as the Pallmac and the Visy that could break more than one bundle at a time.”).

<sup>32</sup> *Ormco Corp. v. Align Tech., Inc.*, 463 F.3d 1299, 1313 (Fed. Cir. 2006) (“Again, the evidence does not suggest that these prior attempts failed because the devices lacked the claimed features.”); *id.* (“Again, the evidence does not suggest that these prior attempts failed because the devices lacked the claimed features. We therefore conclude that the evidence of secondary considerations is inadequate to raise any doubt as to the obviousness of claims 1-3 and 7 . . .”).

- serve as an indication of nonobviousness, the evidence must show that the alleged copying was the replication of a specific product.<sup>33</sup>)
5. unexpected and superior results from the claimed invention; (However, evidence of unexpectedly superior results must be commensurate in scope with the asserted claims in order to support a finding of nonobviousness. If the claims are broad enough to cover devices that either do or do not provide the unexpected result, then the result is irrelevant when determining whether the claims are obvious or not. There must also be a link between the unexpected results and the claimed invention. This means that if the prior art also can achieve the alleged unexpected results, the alleged unexpected results should not be considered as indicating nonobviousness. In addition, to prove unexpected results, there must be comparative tests that provide experimental data demonstrating that the invention achieves results superior to the closest prior art.<sup>34</sup>)
  6. acceptance by others of the claimed invention as shown by praise from others in the field of the invention or from the licensing of the claimed invention; (However, to give substantial weight to the factor of industry praise, a link between the merits of the claimed invention and evidence of the praise is required. This means that the praise may be attributed to the patented invention only where the product actually embodies the claimed

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<sup>33</sup> *Cable Electric Prods. v. Genmark*, 770 F.2d 1015, 1028 (Fed. Cir. 1985) (“It is our conclusion that more than the mere fact of copying by an accused infringer is needed to make that action significant to a determination of the obviousness issue.”); *Id.* (“Rather than supporting a conclusion of obviousness, copying could have occurred out of a general lack of concern for patent property, in which case it weighs neither for nor against the nonobviousness of a specific patent.”); *Iron Grip Barbell Co., Inc. v. USA Sports, Inc.*, 392 F.3d 1317, 1325 (Fed. Cir. 2004) (“[C]opying requires the replication of a specific product.”).

<sup>34</sup> *Application of Linder*, 457 F.2d 506, 508 (C.C.P.A. 1972) (“It is well established that the objective evidence of nonobviousness must be commensurate in scope with the claims.”) (cited references omitted); *In re Kubin*, 561 F.3d 1351, 1356 (Fed. Cir. 2009); *Therasense, Inc. v. Becton, Dickinson & Co.*, 593 F.3d 1325, 1336 (Fed. Cir. 2010) (“Because the claims are broad enough to cover devices that either do or do not solve the [problem], [patentee’s] objective evidence of non-obviousness fails because it is not commensurate in scope with the claims which the evidence is offered to support.”) (citations omitted) (cited references omitted); *In re Baxter Travenol Labs*, 952 F.2d at 392 (rejecting unexpected results evidence where the results were achieved by the prior art); *id.* (“[W]hen unexpected results are used as evidence of nonobviousness, the results must be shown to be unexpected compared with the closest prior art.”); *In re De Blauwe*, 736 F.2d 699, (Fed. Cir. 1984) (“When an article is said to achieve unexpected (i.e. superior) results, [they must] be shown as superior compared to the results [of] other articles. [A]n applicant relying on comparative tests to rebut a prima facie case of obviousness must compare his claimed invention to the closest prior art.”) (internal quotations omitted) (cited references omitted).

- features. The praise must focus on the scope of the claims to be relevant as a factor supporting nonobviousness.<sup>35</sup>) and
7. disclosures in the prior art that criticize, discredit, or otherwise discourage the claimed invention and would therefore tend to show that the invention was not obvious.
  8. other evidence tending to show nonobviousness. (An example of other evidence may be evidences of licenses; however, in order for this evidence to be relevant to whether an invention is nonobvious, the evidence must show a link between the licensing activity and the merits of the claimed invention. The licenses must have been obtained due to the merits of the claimed invention. This is because it is often cheaper to take licenses than to defend infringement suits.<sup>36</sup>)

B. Factors tending to show obviousness, if proven by Defendants, are as follows:

1. independent invention of the claimed invention by others before or at about the same time as the named inventor thought of it; and
2. other evidence tending to show obviousness.

You may consider the presence of any of the list factors A.1-8 as appropriate as an indication that the claimed invention would not have been obvious at the time the claimed invention was made. And you may consider the presence of the list factors B.1-2 as appropriate as an indication that the claimed invention would have been obvious at such time. Although you should consider any evidence of these factors, the relevance and importance of any of them to your decision on whether the claimed invention would have been obvious is up to you.

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<sup>35</sup> *Muniauction, Inc. v. Thomson Corp.*, 532 F.3d 1318, 1327-28 (Fed. Cir. 2008) (“[C]ommercial success or other secondary considerations may presumptively be attributed to the patented invention only where the marketed product embodies the claimed features, and is coextensive with them.”); *id.* (“The press coverage of the award in the record. . . focuses on the availability of maturity-by-maturity bidding in the Muniauction system, as compared to the conventional all-or-none bidding. Although both auction types are disclosed in the written description of the . . . patent, claims 1 and 31 include conventional all-or-none bidding, as well as maturity-by-maturity bidding. Thus, the 1999 award lacks the required nexus with the scope of the claims.”) (citations omitted).

<sup>36</sup> *SIBIA Neurosciences, Inc. v. Cadus Pharmaceutical Corp.*, 225 F.3d 1349, 1358 (Fed. Cir. 2000); *Iron Grip Barbell Co., Inc. v. USA Sports, Inc.*, 392 F.3d 1317, 1324 (Fed. Cir. 2004) (“Our cases specifically require affirmative evidence of nexus where the evidence of commercial success presented is a license, because it is often ‘cheaper to take licenses than to defend infringement suits.’”) (citing *EWP Corp. v. Reliance Universal Inc.*, 755 F.2d 898, 908 (Fed. Cir. 1985)).

When determining whether the patents are invalid based on prior art presented to you that was not considered by the PTO, the burden of proving invalidity is a preponderance of the evidence. Otherwise, the Defendants must prove invalidity by clear and convincing evidence. This is a higher standard than a preponderance of the evidence, but it does not require proof beyond a reasonable doubt. Clear and convincing evidence is evidence that shows it is highly probable that the claims are invalid.<sup>37</sup> If you find that a claimed invention was obvious as explained above, you must find that claim invalid.

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<sup>37</sup> Source: *Futorian Mfg. Corp. v. Dual Mfg. & Eng'g, Inc.*, 528 F.2d 941, 943-44 (1st Cir. 1976); *Rains v. Niaqua, Inc.*, 406 F.2d 275, 278 (2d Cir. 1969); *A.B. Baumstimler v. Rankin*, 677 F.2d 1061, 1066, 1068 (5th Cir. 1982); *Eltra Corp. v. Basic Inc.*, 599 F.2d 745, 750 (6th Cir. 1979); *Dickey-John Corp. v. Int'l Tapetronics Corp.*, 710 F.2d 329, 337 (7th Cir. 1983); *Rite-Nail Packaging Corp. v. Berryfast, Inc.*, 706 F.2d 933, 935 (9th Cir. 1983); *Mfg. Research Corp. v. Graybar Elec. Co.*, 679 F.2d 1355, 1360-61, 1363-64 (11th Cir. 1982).

### 1.13 SCOPE AND CONTENT OF PRIOR ART<sup>38</sup>

Fractus and the Defendants agree that the following prior art references should be included in the prior art you use to decide the validity of the asserted claims of the nine patents at issue:

[INSERT LIST OF AGREED-UPON PRIOR ART]

Fractus and the Defendants disagree on whether the following prior art reference(s) should be included in the prior art you use to decide the validity of the asserted claims:

[INSERT LIST OF DISAGREED-UPON PRIOR ART]

To qualify as prior art relevant to the nine patents at issue, these references must be reasonably related to the claimed invention of the patent. A reference is reasonably related if it is in the same field as the claimed invention or is from another field to which a person of ordinary skill in the field would look to solve a known problem. Remember that prior art is not limited to patents and published materials, and devices which were on sale or in public use. Prior art also includes the general knowledge that would have been available to one of ordinary skill in the field of the invention.

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<sup>38</sup> Source: Model Patent Jury Instructions 5.11; *Graham v. John Deere Co.*, 383 U.S. 1 (1966); *KSR Int'l Co. v. Teleflex, Inc.*, 550 U.S. 398, 417 (2007); *Ruiz v. A.B. Chance Co.*, 234 F.3d 654, 664-65 (Fed. Cir. 2000); *Wang Labs. v. Toshiba Corp.*, 993 F.2d 858, 864 (Fed. Cir. 1993).

#### **1.14 DIFFERENCES OVER THE PRIOR ART<sup>39</sup>**

In reaching your conclusion about whether or not the asserted claims of the nine patents at issue would have been obvious at the time the claimed invention was made, you should consider any difference or differences between the prior art reference(s) and the claimed requirements.

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<sup>39</sup> Source: Model Patent Jury Instructions 5.12; *Graham v. John Deere Co.*, 383 U.S. 1 (1966); *Yamanouchi Pharm. Co. v. Danbury Pharmacal, Inc.*, 231 F.3d 1339, 1343-45 (Fed. Cir. 2000); *In re Kotzab*, 217 F.3d 1365, 1369 (Fed. Cir. 2000); *Northern Telecom, Inc. v. Datapoint Corp.*, 908 F.2d 931, 935 (Fed. Cir. 1990).

### **1.15 LEVEL OF ORDINARY SKILL<sup>40</sup>**

Several times in my instructions I have referred to a person of ordinary skill in the field of the invention. It is up to you to decide the level of ordinary skill in the field of the invention. You should consider all of the evidence introduced at trial in making this decision, including:

1. the levels of education and experience of persons working in the field;
2. the types of problems encountered in the field; and
3. the sophistication of the technology.

Fractus contends that the level of ordinary skill in the field of the invention would be an individual who, as of the relevant point in time, had an accredited master's degree in electrical engineering with an emphasis on electromagnetics, some knowledge of fractal antennas, and at least 5 years of experience with antenna design and multi-scale objects; or alternatively, had a doctorate in electrical engineering with an emphasis in electromagnetics, some knowledge of fractal antennas, and at least 2 years of experience with antenna design and multi-scale objects.

Defendants contend that the level of ordinary skill in the field was, as of the late 1990s or early 2000s, (a) someone who (i) held an accredited master's degree in electrical engineering that included significant coverage of antenna technologies and (ii) had two years of practical experience with antenna design; or alternatively (b) someone who (i) held a bachelor's degree in electrical engineering and (ii) had at least four years of practical experience in antenna design.

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<sup>40</sup> Source: Model Patent Jury Instructions 5.13; *Graham v. John Deere Co.*, 383 U.S. 1 (1966); *Brown & Williamson Tobacco Corp. v. Philip Morris Inc.*, 229 F.3d 1120, 1125 (Fed. Cir. 2000); *SIBIA Neurosciences, Inc. v. Cadus Pharm. Corp.*, 225 F.3d 1349, 1355 (Fed. Cir. 2000); *Ryko Mfg. Co. v. Nu-Star, Inc.*, 950 F.2d 714, 718-19 (Fed. Cir. 1991).

## **1.16 INSTRUCTIONS FOR DELIBERATIONS<sup>41</sup>**

You must perform your duties as jurors without bias or prejudice as to any party. The law does not permit you to be controlled by sympathy, prejudice, or public opinion. All parties expect that you will carefully and impartially consider all the evidence, follow the law as it is now being given to you, and reach a just verdict, regardless of the consequences.

You should consider and decide this case as a dispute between persons of equal standing in the community, of equal worth, and holding the same or similar stations in life. A corporation is entitled to the same fair trial as a private individual. All persons, including corporations, and other organizations stand equal before the law, regardless of size or who owns them, and are to be treated as equals.

When you retire to the jury room to deliberate on your verdict, you may take this charge with you as well as exhibits which the Court has admitted into evidence. Select your Foreperson and conduct your deliberations. If you recess during your deliberations, follow all of the instructions that the Court has given you about your conduct during the trial. After you have reached your unanimous verdict, your Foreperson is to fill in on the form your answers to the questions. Do not reveal your answers until such time as you are discharged, unless otherwise directed by me. You must never disclose to anyone, not even to me, your numerical division on any question.

Any notes that you have taken during this trial are only aids to memory. If your memory should differ from your notes, then you should rely on your memory and not on the notes. The notes are not evidence. A juror who has not taken notes should rely on his or her independent recollection of the evidence and should not be unduly influenced by the notes of other jurors.

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<sup>41</sup> Source: The Court's Sample Products Liability Jury Charge provided by the Court on its website, adapted to a patent case.

Notes are not entitled to any greater weight than the recollection or impression of each juror about the testimony.

If you want to communicate with me at any time, please give a written message or question to the Court Security Officer, who will bring it to me. I will then respond as promptly as possible either in writing or by having you brought into the courtroom so that I can address you orally. I will always first disclose to the attorneys your question and my response before I answer your question.

After you have reached a verdict, you are not required to talk with anyone about the case unless the Court orders otherwise.

**You may now retire to the jury room to conduct your deliberations.**